

30 L as half step (the 7th and upper tonic notes in a major scale) to be played by the 1st and
31 2nd fingers, the rests are whole steps in a tetrachord.

1 Claim 26 (amended). The apparatus of claim 11, wherein the scale board numbers represent
2 the first, second, third, fourth, fifth, sixth and seventh degrees of a diatonic scale.

REMARKS

Claims 1-24 are currently pending in this application; however, in the Office Action Summary, Disposition of Claims, the Examiner indicated that only 20 claims were pending. Applicant assumes that this is a typographical error since, in the Detailed Action remarks of the Office Action, the Examiner rejected claims 1-9 and 10-24. Also, claim 10 was objected to as containing allowable subject matter. By this amendment, claims 12, 14, 18 and 21-24 are cancelled, claims 1-3, 7-9, 11 and 20 are amended, and new claims 25-26 are proposed for the Examiner's consideration. In addition, the abstract and specification are amended herein. These amendments are made for clarification purposes and to correct minor typographical and grammatical errors and not for patentability reasons. Marked-up versions of the amended claims are attached on a separate sheet. No new matter is added.

Reconsideration of the rejected claims and consideration of the new claim, in view of the above amendments and the following remarks, is respectfully requested.

Abstract

Applicant requests that the Abstract be amended as set forth above. This revised abstract provides the correct spelling of "fingerboard" and "baseboard" as used elsewhere in the specification (see, e.g., page 2, lines 10 and 14), and it highlights additional features of the invention that are described in the specification (see, e.g., page 2, lines 10-11 and 16, and page 2, lines 20-23).

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Specification

Applicant requests that the specification be amended as set forth above. These amendments are made for clarification purposes and to correct minor typographical and grammatical errors and not for patentability reasons. In particular, as stated above, Applicant takes this opportunity to point out that the terms “fingerboard” and “baseboard” used throughout the specification should each be spelled as a single word so as to be consistent with the remainder of the specification. Also, please note that the term “codon” at page 2 of the specification should be used in place of “code.” The codon is in the specification at page 8, lines 14-17.

With respect to the descriptions of Figs. 5, 5A and 5B, in the “Brief Descriptions of Drawings,” Applicant proposes to insert a parenthetical description of each type of chart to more accurately and fully describe the key in which the chart is composed. So, for example, since Fig. 5 is composed in the treble clef, a descriptive phrase of “(in the treble clef)” is added for clarity in the paragraph at page 4, lines 18-19. Similar revisions are proposed for the descriptions of Figs. 5A and 5B, at page 4, lines 20-21 and page 4, lines 22-23, respectively.

With respect to the description of Table 3, at page 11, lines 6-10, an asterisk “*” is inserted before the term “Enharmonic Keys” so as to coincide with the asterisk in the table and to comport in content with Table 2 at page 10, line 5. Similarly, in the description of Table 6, at page 20, lines 13-16, an asterisk is inserted for the same reason.

With respect to the term “Key Circle,” as referred to at page 13, line 14, that paragraph is amended to clarify that this is a known term and to avoid confusion with the “Key Wheel” of the present invention (see, e.g., page 13, line 16). Finally, the heading at page 15, lines 4-5 is amended to correct the spelling of “RELATIONSHIP” therein.

Claims

Applicant requests that claims 1-3, 7-9, 11 and 20 be amended as set forth above. These amendments are made solely for clarification purposes and to correct minor typographical and

grammatical errors and not for patentability reasons. In particular, as stated above, Applicant has amended claims 1-3, 7 and 11 to ensure the terms “fingerboard” and “baseboard” are spelled as a single word so as to be consistent with the remainder of the specification. With respect to claim 1, Applicant takes this opportunity to insert the phrase “having a fingerboard” after the phrase “stringed instrument” to clarify that the stringed instrument referred to in the claim includes a fingerboard, which is referred to in line 4 of the claim. Support for this amendment is found in at least page 2, lines 10 and 22. With respect to claim 2, Applicant proposes to insert the additional limitation that the twelve keys represent major and minor keys as described in the specification at page 1, lines 12-13. Additional support for this amendment can be found in the specification at page 9, lines 19-20; page 12, lines 3-4 and line 13; and in Tables 3-4. Similarly, the twelve keys of claim 9 and the diatonic scale of claim 11 include major and minor keys for the same reasons stated above for claim 2. With respect to claim 7, at line 6, the claim is clarified to recite the “plurality of key signatures with positions adjacent to each bar” to denote the locations of the key signatures. Support for this amendment is found at page 2, line 23 of the specification. Also, claims 8 and 9 are amended to correct typographical errors to recite that the finger patterns correspond to a “codon” (as opposed to a “code”), which is a term defined in the specification (see, e.g., page 8, lines 14-17).

With respect to claim 20, Applicant wishes to cancel reference to the “transparent overlay” in the second line of the claim, which comports with the cancellation of claims 12 and 14 as requested above.

Added Claims

Applicant proposes to add new claims 25-26 to this application. With respect to claim 25, this claim is proposed for the Examiner’s consideration, and it includes the allowable subject matter of claim 10 along with the limitations of the base claim from which it depends (claim 1) and the intervening claims (claims 7-9) as discussed below. Applicant proposes this added claim although Applicant asserts that claim 10, along with the other pending and added claims in this application, should be allowed on the basis of the merits of Applicant’s arguments herein. With respect to claim

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26, Applicant takes this opportunity to recite the additional limitations that the scale board numbers represent all seven of the degrees of a diatonic major scale. Support for this added claim can be found in at least page 3, lines 19-21 of the specification.

Objections to Claims

Claim 10 was objected to as being dependent upon a rejected base claim, but the Examiner indicated claim 10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As originally written, claim 10 depends indirectly from independent claim 1, which Applicant asserts is patentably distinct and in condition for allowance as set forth below. Accordingly, Applicant respectfully asserts that the Examiner's objections to claim 10 should be withdrawn and that the entire application should be passed to issue.

Alternatively, Applicant proposes new independent claim 25, which includes the subject matter of claim 10 and the claims from which it depends, for the Examiner's consideration

§ 102(b) Rejections

Claims 21-22 were rejected under 35 U.S.C. § 102(b) as being anticipated by Andrews, U.S. Patent No. 3,769,872. However, inasmuch as Applicant has now cancelled claims 21-24 as set forth above, Applicant does not offer a response to the rejection of claims 21-22.

§ 103(a) Rejections

Claims 1-9 and 11-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Coonce, U.S. Patent No. 6,218,603, in view of Mohos, U.S. Patent No. 3,752,031. In addition, claims 23 and 24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Andrews, U.S. Patent No. 3,769,872, in view of Coonce, in view of Mohos. However, inasmuch as Applicant has now cancelled claims 21-24 as set forth above, Applicant does not offer a response to the rejection of claims 23-24. Applicant does respectfully traverse the rejections of claims 1-9 and 11-20 and submits that these claims are non-obvious and patentably distinct from the prior art references and therefore should be allowed.

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The present invention solves the problem of providing a tool and method for learning the finger patterns of various stringed instruments, and, in particular for learning the left-hand finger patterns associated with various keys used in playing stringed instruments to include the violin, viola, cello, bass, mandolin and guitar, etc. The tool disclosed in this application includes a baseboard and a plurality of templates that can be attached to the baseboard so as to simulate the fingerboard of a stringed instrument—each note on the baseboard being positioned in the same relative position as it would appear on the fingerboard of the stringed instrument. Because this tool can be used separately from the instrument itself (i.e., the baseboard and accompanying templates are separated from the fingerboard of the instrument, and serve to simulate the fingerboard for the student), it can be used as a “mental map” for teaching/learning the various finger patterns necessary to master the playing of a stringed instrument.

A “finger pattern” is understood to be a group of notes across the fingerboard of a stringed instrument, either in a major or a minor scale (key), that corresponds to one particular hand position. See, e.g., Specification at page 1, lines 10-15. As the hand position shifts, the finger pattern changes according to the configuration of the particular stringed instrument being studied. As such, each shifting of the hand position and the types of scales (keys), determines the outcome of each finger pattern in each type of stringed instrument. This phenomenon is unique to the stringed instruments because many notes repeat themselves on various places on the strings, and theoretically there are hundreds of finger patterns. That is, each finger pattern can have multiple uses under different combinations of musical keys and positions. Therefore, by arranging the plurality of templates in a predetermined fashion, the present tool thereby facilitates learning of the systematic finger patterns associated with multi-stringed instruments by helping the student visualize the necessary finger patterns for a given key and by teaching an understanding of the repetitive nature of finger patterns as different keys are played.

Such an invention provides significant advantages over prior art systems that are known to be limited because they tend to focus on application to a single string at a time and a relatively few

simple keys, but prior art systems do not teach systematic finger patterns in relation to key and position. In addition, prior art systems lack the ability to provide a teaching map for studying finger patterns in all of the strings of an instrument in all keys and in all finger positions. This is because prior art systems, such as the Coonce patent cited by the Examiner (U.S. Patent No. 6,218,603) are limited to finger placement for a single string at a time, i.e., they teach locating individual notes, but not finger patterns or scales (keys). As a result, such systems are problematic for students who wish to learn finger placement in more than one string, since finger patterns necessarily differ from one string to another. In contrast, the present invention provides a set of tools (and a method for using the same) presented on simulated fingerboards for teaching comprehensive finger patterns corresponding to sets of specific notes that correlate with specific scales (keys)—in every key and finger position for various stringed instruments. The tool is in the form of templates attached to a baseboard to simulate the fingerboards of a stringed instrument, and the baseboard is separated from the instrument and therefore can be used as a mental map for learning finger patterns. Moreover, the associated method disclosed by the Applicant allows easy visualization and memorization of a multitude of finger patterns by association of those finger patterns with the colors of a rainbow. This is yet another novel feature of Applicant's disclosed invention in which the fixed nature of the finger patterns are correlated to the colors of a rainbow in sequence to aid the student in learning the finger patterns.

To establish a *prima facie* case of obviousness, two requirements must be satisfied. First, the cited references must teach or suggest all the features recited in any rejected claim. Second, there must have been some teaching or suggestion in existence at the time the invention was made that would have motivated or led one of ordinary skill in the art to combine the references in an attempt to form the claimed invention. *See* MPEP § 2143.01.

As to claim 1, the disclosed invention recites an apparatus for displaying finger patterns of a stringed instrument comprising a baseboard that includes a pattern of chromatic notes, with each note on the baseboard being positioned in the same relative position as it would appear on the fingerboard of the stringed instrument, and a plurality of templates for placement over the baseboard,

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with each template corresponding to at least one particular key in a particular position and defining a plurality of holes through which notes corresponding to the particular key are visible. As claimed, therefore, multiple templates are envisioned to be placed over the baseboard in a manner that can represent up to twelve different major or minor keys in more than seven different positions (see Specification, at page 2, lines 13-16; page 9, lines 19-20; page 12, lines 3-4 and line 13; and Tables 3-4.)

In sharp contrast, the Coonce patent does not teach or suggest all of these features. In fact, Coonce teaches only a single “note position locator” that is attached to the fingerboard of the stringed instrument (see Coonce, Figs. 2a-2d), and it does not contemplate the use of a plurality of templates that can be attached to a baseboard that is separated from the instrument itself. As such, Coonce is wholly inapplicable to the present invention because it is merely a note locator for stringed instruments, that is, it only teaches how to find individual notes in the correct pitch based on mathematical calculations derived from the laws of acoustics. Thus, Coonce is not concerned with the teaching of finger patterns in various scales (keys) that can be applied to a variety of stringed instruments. In particular, Coonce does not teach the specific use of notes in a manner that each note is positioned in the same relative position that it would appear on the fingerboard of a stringed instrument.

Even the Examiner admits that Coonce is deficient as a prior art reference in these respects. (See Office Action, at page 2). In fact, Coonce is specifically limited to a “note locator for stringed instruments...that give[s] the user easily identifiable visual references for positioning the fingers on the strings of the instrument...” and where the note locations are determined mathematically so as to find individual notes in the correct pitch. In other words, Coonce discloses a tool that merely provides a convenient means for visually locating an individual note, but it cannot encompass all notes in a scale (the finger pattern) across a fingerboard for all strings in any instrument. Furthermore, Coonce does not suggest any modification of the “note locator” apparatus that would lead one to use multiple templates or that would involve the specific use of notes positioned in the same relative position that it would appear on the fingerboard of a stringed instrument, nor does the

Examiner provide any such suggestion or motivation. Therefore, because Coonce does not teach or suggest all of the limitations recited in claim 1, it is respectfully submitted that the Coonce patent cannot render claim 1 obvious.

To make up for the deficiencies of Coonce, the Examiner cited the Mohos patent. The reliance on Mohos is misplaced for several reasons. First, Mohos teaches only a modulator that allows visual manipulation of twelve-tone-row sequences. Thus, it has nothing to do with teaching finger patterns associated with stringed instruments. In essence, Mohos is merely a dodecophonic calculation chart that is a composition device used in the composition of tone rows, which are sets of 12 notes in whatever order the composer selects (see, e.g., Mohos, Col. 1, lines 21-27). Mohos is a tool for composition of music — as opposed to a training tool for learning how to play stringed instruments (see, e.g., Mohos, Col. 1, lines 54-58). Nothing in Mohos teaches or suggests the instruction of finger patterns as recited in claim 1 of the present invention.

Second, Mohos only teaches the use of a single template that is placed on the “base plate” (see Mohos, Fig. 2), the template being “punched...in...various positions...” (see Mohos, Col. 2, lines 11-12). In fact, the claims of Mohos are specific to reciting a singular template (see Mohos, claim 1, line 3; claim 3, lines 1-2; claim 4, lines 3-4; and claim 6, line 2). Moreover, if a plurality of templates were to be used with the Mohos invention, as is recited in claim 1 of the present invention, it would fundamentally change the nature of the invention and destroy its function. Though the Examiner asserts that Mohos teaches a plurality of templates, Applicant respectfully disagrees as set forth above. In fact, the Examiner’s reference to “(see figures 11a-11c)” at page 2 of the Detailed Action section of the Office Action is not understood by Applicant since Mohos contains only Figs. 1-8. Nevertheless, it can be seen by Fig. 2 of Mohos, and the specific wording of the claims therein, that only a single template is contemplated in Mohos and that template does not in any way involve the teaching of complex finger patterns associated with stringed instruments.

Based on the foregoing arguments, Applicant respectfully submits that Mohos does not teach or suggest all of the features of the present invention, nor has the examiner provided any motivation to modify or combine the tone composition chart of Mohos with any other device so as to achieve

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a tool for teaching finger patterns for stringed instruments as taught by the present invention. Applicant respectfully submits that Mohos is therefore improperly combined with Coonce in this instance.

In summary, neither of these references teach or suggest the features of the present invention. Further, there is no motivation to combine or modify the references as the Examiner has done to achieve the rejection of claim 1. Accordingly, it is respectfully submitted that claim 1 and its dependent claims are non-obvious and patentable over a Coonce-Mohos combination.

Rejection of dependent claims 2-10 on obviousness grounds is misplaced since those claims depend from independent claim 1 that is distinguishable from the applied prior art references as stated above. In any event, those claims are non-obvious and patentable in their own right as set forth below.

Claims 2-3 depend from claim 1, and recite the limitations that the plurality of templates can be releasably secured to the baseboard. Again, each of these claims is non-obvious and patentable over the Coonce-Mohos combination on the same grounds as is claim 1 because neither of those references teach or suggest the use of multiple templates secured to a baseboard. In particular, neither Coonce nor Mohos teach the use of multiple templates to represent the twelve different major or minor keys in more than seven positions so as to allow the learning of finger patterns for stringed instruments. As to claims 4-6, the Examiner misinterprets the scope of the Coonce patent in rejecting these claims. Those claims recite the limitation of color-coding the templates so that the various finger patterns can be associated with a particular color as a teaching and instructional tool. Mohos does not teach or suggest the use of color in its modulation/music composition chart. Though Coonce teaches the use of color-coding associated with the "note position indicators," (see Coonce, claim 1, lines 4 and 8-9), those colors are merely for purposes of differentiating one note location from another, that is, the colors are merely visual indicators. In stark contrast, the color-coding disclosed by the present invention is associated with each of the various finger patterns and its fixed order as represented by the rainbow sequence, thus the use of color is part of the tool for visualizing and memorizing the entire finger pattern — rather than just a particular individual note as taught by

Coonce. Neither reference cited by the Examiner teaches or suggests such a system as claimed herein, nor is there any motivation for such a system based on a combination of those references. Accordingly, based on at least the foregoing differences, it is respectfully submitted that dependent claims 2-6 are non-obvious and patentable over a combination of Coonce and Mohos.

As to dependent claims 7-10, those claims are similarly non-obvious and readily distinguishable from the references cited by the Examiner. Those claims refer to a base with a plurality of color-coded bars extending radially from the center of the base, wherein each bar corresponds to a separate finger pattern of a stringed instrument and the arrangement of the bars corresponds to the naturally cyclic pattern of the various finger patterns of the stringed instrument. In the specification, a preferred embodiment of this device is described as the "Key Wheel" as shown in Figs. 8-11 of the present disclosure. Neither Coonce nor Mohos teach or suggest such a device. Again, Mohos does not teach or suggest the use of a color-coded device, and, even if it did, there is certainly no teaching or suggestion of the use of any radially-emanating color-coded bars as set forth above. Likewise, Coonce discusses the use of color only with respect to the location of individual notes, and because the Coonce device only attaches to the fingerboard of the stringed instrument, it is linear in its layout and cannot include radial bars emanating from a central point. Therefore, the combination of Coonce-Mohos does not teach or suggest such a feature and the Examiner provides no motivation to modify or combine either reference to justify these rejections.

As to independent claim 11, which provides another device for teaching finger patterns of a stringed instrument, the Examiner provides no substantive rationale for the rejection of this claim other than it is "an efficient means of teaching music" (see Detailed Action of Office Action, page 3). That claim comprises a scale board including a pattern of numbers, each number corresponding to a degree of a note for a given musical scale and positioned in the same relative position as the degree of the note appears on the fingerboard of the stringed instrument, and a ladder frame that can be placed on the scale board in multiple positions, the ladder frame defining a plurality of windows so as to expose the numbers on the scale board. In essence, the scale board of claim 11 represents the

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finger patterns on the baseboard recited in claim 1, the twelve major or minor keys are represented by the degree numbers one through seven, and the movable ladder frame represents the multiple templates recited in claim 1. That is, the single ladder frame takes the place of the seven templates that correspond to the up to seven finger patterns for each of the twelve major or minor keys. Moreover, as recited in claims 13 and new claim 25, each of the numbers one through seven represents one of the seven degrees of a diatonic scale. This device allows the student to focus exclusively on learning the finger patterns themselves and the skill of transposition, without the additional complexity of the letters associated with the musical notes.

It can be readily seen that neither Coonce nor Mohos, nor any combination of those references, teach or suggest any such device as recited in claim 11, or its dependent claims 13, 15-17 and 19-20 for similar reasons as stated above. Namely, neither Coonce nor Mohos teach using numbers in a Movable Do Solfege System, as opposed to letters of the musical scale, to represent finger patterns for the purpose of teaching students to play stringed instruments. Similarly, no combination of these two references would achieve the claimed invention, and the Examiner has provided no motivation to make such a combination in rejecting these claims. Accordingly, based on at least the foregoing differences, it is respectfully submitted that dependent claims 11, 13, 15-17 and 19-20 are non-obvious and patentable over a combination of Coonce and Mohos.

Therefore, based on the amendments and arguments presented herein, Applicant asserts that the 35 U.S.C. § 103(a) rejections are now overcome and these claims are in condition for allowance.

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Conclusion

In view of the foregoing amendments and remarks, Applicant submits that all of the claims are patentably distinct from the prior art of record and are in condition for allowance. Therefore, the Examiner is requested to pass the above application to issue. The Examiner is invited to contact the undersigned at the telephone number listed below, if needed. Applicant hereby makes a written conditional petition for extension of time, if required. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 13-0431.

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'P. McGowan', with a long horizontal line extending to the right.

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Marked-Up Version of Claims

The following is a marked-up version of amended claims 1-3, 7-9, 11 and 20 and new claims 25-26.

1 Claim 1 (amended). Apparatus for displaying finger patterns of a stringed instrument having
2 a fingerboard, the apparatus comprising:

3 a [base board]baseboard having thereon a pattern of chromatic notes, each note positioned
4 in the same relative position as it appears on the [finger board]fingerboard of the stringed instrument;
5 and

6 a plurality of templates for placement over the [base board]baseboard, each template
7 corresponding to at least one particular key in a particular position and defining a plurality of holes
8 through which notes corresponding to the particular key are visible.

1 Claim 2 (amended). The apparatus of claim 1, wherein each template can be releasably
2 secured to the [base board]baseboard to represent twelve different major and minor keys in more
3 than seven different positions.

1 Claim 3 (amended). The apparatus of claim 1, wherein all of the templates can be
2 simultaneously and releasably secured to the [base board]baseboard.

1 Claim 7 (amended). The apparatus of claim 1, and further comprising:

2 a base having thereon a plurality of color-coded bars extending radially outward from a
3 center of the base, each bar corresponds to a finger pattern of the stringed instrument and the
4 arrangement of the bars corresponds to the cyclic nature of finger patterns on the [finger
5 board]fingerboard of the stringed instrument; and

6 a plurality of key signatures with positions adjacent to each bar.

1 Claim 8 (amended). The apparatus of claim 7, wherein each bar corresponds to a finger
2 pattern [code]codon.

1 Claim 9 (amended). The apparatus of claim 8, wherein each finger pattern [code]codon is
2 a combination of four letters, and corresponding to a finger pattern to be used to play notes for
3 twelve major and minor keys in their corresponding positions.

1 Claim 11 (amended). Apparatus for displaying finger patterns of a stringed instrument, the
2 apparatus comprising:

3 a scale board having thereon a pattern of numbers, each number corresponding to a degree
4 of a note for a given diatonic[major] scale and positioned in the same relative position as the degree
5 of the note appears on the [finger board]fingerboard of the stringed instrument; and

6 a ladder frame for placement on the scale board in a plurality of positions, the ladder frame
7 defining a plurality of windows to expose the scale board numbers.

1 Claim 20 (amended). The apparatus of claim 11, wherein the ladder frame defines five
2 windows and the scale board[and the transparent overlay] corresponds to a six-stringed instrument.

1 Claim 25 (new). Apparatus for displaying finger patterns of a stringed instrument having a
2 fingerboard, the apparatus comprising:

3 a baseboard having thereon a pattern of chromatic notes, each note positioned in the same
4 relative position as it appears on the fingerboard of the stringed instrument;

5 a plurality of templates for placement over the baseboard, each template corresponding to at
6 least one particular key in a particular position and defining a plurality of holes through which notes
7 corresponding to the particular key are visible;

8 a base having thereon a plurality of color-coded bars extending radially outward from a
9 center of the base, each bar corresponds to a finger pattern of the stringed instrument and the
10 arrangement of the bars corresponds to the cyclic nature of finger patterns on the fingerboard of the
11 stringed instrument; and

12 a plurality of key signatures with positions adjacent to each bar,

13 wherein each bar corresponds to a finger pattern codon comprising a combination of four
14 letters, and corresponding to a finger pattern used to play notes for twelve major and minor keys in
15 their corresponding positions,

16 wherein four of the letters are taken from a set of seven letters h, m, l, O, H, M, L, and
17 wherein:

18 h as half step (the 3rd and 4th degrees of note in a major scale) to be played by the 3rd
19 and 4th fingers, the rests are whole steps in a tetrachord;

20 m as half step (the 3rd and 4th degrees of note in a major scale) to be played by the 2nd
21 and 3rd fingers, the rests are whole steps in a tetrachord;

22 l as half step (the 3rd and 4th degrees of note in a major scale) to be played by the 1st
23 and 2nd fingers, the rests are whole steps in a tetrachord;

24 O as all four fingers are spread out with whole steps (degrees of note 4th, 5th, 6th, and 7th
25 in a major scale) in between a tetrachord;

26 H as half step (the 7th and upper tonic notes in a major scale) to be played by the 3rd and
27 4th fingers, the rests are whole steps in a tetrachord;

28 M as half step (the 7th and upper tonic notes in a major scale) to be played by the 2nd and
29 3rd fingers, the rests are whole steps in a tetrachord; and

30 L as half step (the 7th and upper tonic notes in a major scale) to be played by the 1st and
31 2nd fingers, the rests are whole steps in a tetrachord.

1 Claim 26 (amended). The apparatus of claim 11, wherein the scale board numbers represent
2 the first, second, third, fourth, fifth, sixth and seventh degrees of a diatonic scale.

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Marked-Up Version of Changes to Specification

The following is a marked-up version of changes made to the specification.

Please replace the paragraph at page 2, lines 6-18 with the following paragraph.

The present invention is directed to an improved tool for teaching finger patterns on a stringed instrument. In one embodiment of the present invention there is provided an apparatus for displaying finger patterns of a stringed instrument, the apparatus including: a [base board]baseboard having thereon a pattern of chromatic notes, each note positioned in the same relative position as it appears on the fingerboard of the stringed instrument; and a plurality of templates for placement over the [base board]baseboard, each template corresponding to at least one particular key in a particular position and defining a plurality of holes through which notes corresponding to the particular key are visible. The templates can be releasably secured to the baseboard to represent twelve different major keys in more than seven different positions, including use of all the templates being simultaneously and releasably secured to the baseboard. The templates are preferably color-coded and even more preferably color-coded in a pre-determined pattern, such as in the spectrum of a rainbow.

Please replace the paragraph at page 4, lines 13-14 with the following paragraph.

Figs. 2A through 2H are the fingerboard charts of Fig. 1 with the seven finger pattern templates being sequentially added in Figs. 2B through 2H to show all notes in G major.

Please replace the paragraph at page 2, line 19 through page 3, line 16 with the following paragraph.

The apparatus may further include: a base having thereon a plurality of color-coded bars extending radially outward from a center of the base, each bar corresponds to a finger pattern of the stringed instrument and the arrangement of the bars corresponds to the cyclic

nature of finger patterns on the finger board of the stringed instrument; and a plurality of key signatures with positions adjacent to each bar. Each bar can correspond to a finger pattern [code]codon. The finger pattern [code]codon can be a combination of four letters taken from a set of a seven-letter-code, and corresponding to a finger pattern to be used to play notes for twelve major keys in their corresponding positions, such as the seven letters: h, m, l, O, H, M, and L, wherein: **h** represents a half step in a tetrachord – the 3rd and 4th degrees of notes in a major diatonic scale, and played closely together by the third and fourth fingers; **m** represents a half step in a tetrachord – the 3rd and 4th degrees of notes in a major scale, and played closely together by the second and third fingers; **l** represents a half step in a tetrachord – the 3rd and 4th degrees of notes in a major scale, and played closely together by the first and second fingers; **O** represents all four fingers spaced apart and played in whole steps – the 4th, 5th, 6th, and 7th tetrachord; **H** represents a half step in a tetrachord – the 7th and upper tonic notes in a major scale, and played closely together by the third and fourth fingers; **M** represents a half step in a tetrachord – the 7th and upper tonic notes in a major scale, and played closely together by the second and third fingers; and **L** represents a half step in a tetrachord [-]–the 7th and upper tonic notes in a major scale, and played closely together by the first and second fingers.

Please replace the paragraph at page 4, lines 18-19 with the following paragraph.

Fig. 5 is a combined fingerboard chart for a violin (in the treble clef), in accordance with the present invention;

Please replace the paragraph at page 4, lines 20-21 with the following paragraph.

Fig. 5A is a combined fingerboard chart for a viola (in the alto clef) or a cello (in the bass clef), in accordance with the present invention;

Please replace the paragraph at page 4, lines 22-23 with the following paragraph.

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Fig. 5B is a combined fingerboard chart for a guitar (in the treble clef), in accordance with the present invention;

Please replace the paragraph at page 5, lines 3-5 with the following paragraph.

Figs. 7A through 7H are the fingerboard charts of Fig. 6 with the seven finger pattern templates being sequentially added in Figs. 7B through 7H to show all notes in C major;

Please replace the paragraph at page 5, lines 13-15 with the following paragraph.

Fig. 12 is a Movable-Do System scale board for a violin, or a viola, or a cello, in accordance with the present invention, including an overlay transparency and a ladder frame;

Please replace the paragraph at page 5, lines 16-17 with the following paragraph.

Fig. 13 is [an]the alternate scale board of Fig. 12 with the transparency and ladder frame positioned on the scale board;

Please replace the paragraph at page 5, lines 18-19 with the following paragraph.

Fig. 14 is [an]the alternate guitar scale board [for a guitar]in accordance with the present invention, including an overlay transparency and a ladder frame;

Please replace the paragraph at page 5, lines 20-21 with the following paragraph.

Fig. 15 is [an]the alternate guitar scale board of Fig. 14 with the transparency and ladder frame positioned on the scale board;

Please replace the paragraph at page 5, lines 22-23 with the following paragraph.

Fig. 16 is a tonic block puzzle for learning finger patterns on a violin, viola, or cello;
and

Please replace the paragraph at page 6, line 23 with the following paragraph.

1) Construct [Base Board]Baseboard

Please replace the paragraph at page 11, lines 6-10 with the following paragraph.

A

*Enharmonic Keys:

D# minor (6 sharps) = Eb minor (6 flats)

A# minor (7 sharps) = Bb minor (5 flats)

G# minor (5 sharps) = Ab minor (7 flats)

Please replace the paragraph at page 11, line 11 through page 12, line 2 with the following paragraph.

Table 3 shows that:

Eb I minor shares the same finger pattern, mMIL, as E I

D# I and D I minors share the same finger pattern, lLOh, as E II

C# I and C I minors share the same finger pattern, OhHm, as E III

B I and Bb I minors share the same finger pattern, HmMl, as E IV

A# I and A I share the same finger pattern, MILO[.], as E V

G# I and G I minors share the same finger pattern, LOhH, as E VI

F# I and F I minors share the same finger pattern, hHmM, as E VII

Please replace the paragraph at page 13, lines 6-10 with the following paragraph.

A careful study of Table 4 reveals that those seven finger patterns wear many hats figuratively. It means that one pattern can be used twelve times when keys and positions interplay together. In fact, Table 4 can be transformed into the Major Key Wheel in Fig. 8, which is another embodiment of the present invention for letter learning for strings in accordance with the present invention.

Please replace the paragraph at page 13, lines 11-20 with the following paragraph.

A

Unlike piano, which has black and white note keys alternating in certain ways, strings are different. In strings, without all the white piano keys to denote C major, there is no need to link flat and sharp major keys through C major and arrange them in a circle five degrees apart, which is the essence of the Key Circle that is well known as the “circle of the fifths” in music theory. Rather, in studying strings, it is better to abide by the chromatic note sequence. In the method of the present invention, the Key Wheel 40 may start with any key, and the progression of position for any key shows the changing of finger pattern clockwise in the rainbow color sequence. The Key Wheel also shows that each finger pattern template can have twelve different uses from combinations of key x in position y, though more than twelve are shown in each bar due to presence of enharmonic keys.

Please replace the paragraph at page 13, lines 21-22 with the following paragraph.

Similar key wheels can be made for violas, cellos, and guitars as shown in Figs. 9, 10, and 11, respectively.

Please replace the paragraph at page 14, line 22 through page 15, line 3 with the following paragraph.

This model can be used on violin, viola, and cello without change since all four share[s] four strings, which are tuned at five degrees of notes apart. In the case of a mandolin, it has eight strings but grouped into four. For a guitar, the same method applies but with six strings instead of four (Figs. 14, 15). This embodiment includes a board 60, a transparent sheet 62, and a ladder template 64.

Please replace the paragraph at page 15, lines 4-5 with the following paragraph.

LATERAL AND HORIZONTAL [RELATSHIPS]RELATIONSHIPS IN THE SEVEN FINGER PATTERNS

Please replace the paragraph at page 16, lines 35-39 with the following paragraph.

But notice that in the [m]Movable-[]Do system shown by the degrees of note, as in Fig. 13, the horizontal pattern in a complete row (if there [is]are seven strings instead of four) will be:

4 1 5 2 6 3 7

Please replace the paragraph at page 17, lines 12-16 with the following paragraph.

When two pairs of half step – 3rd & 4th, and 7th & 1st – appear side by side on adjacent strings in an octave as in hH, mM, and IL ([figure]Fig. 13), they form a four-note-cluster, in which the note on the lower right quadrant is the tonic for the major key in the case of violin, viola, and cello. For guitar, the tonic is on the lower left quadrant (Fig. 15).

Please replace the paragraph at page 18, lines 13-16 with the following paragraph.

A similar puzzle 350 can be created for the guitar (see Fig. 17). This puzzle 350 includes a board 352, and a number of sample puzzle pieces 354, 356, 358, 360, 362, 364, 366, 368, 370, and 372. As stated above, more puzzle pieces can be used. This puzzle 350 can be completed in a manner similar to puzzle 300.

Please replace the paragraph at page 18, line 18 through page 19, line 4 with the following paragraph.

Since the [k]Key [w]Wheel 40 is cyclic, one may start a lesson from any key, but it is most logical to:

- a) learn in terms of pattern;
- b) start from first position, then second, third, etc.; and
- c) select most commonly played keys first.

Having these in mind, the best way to learn and use the present invention would be:

- a) start with first positions of G major red template, D major green template, and C major blue template;

b) next learn both G major and C major second positions, that is, orange template for G major and indigo template for C major; and

c) after completing third positions of G major yellow template and C major violet template, one has already learned all the seven finger patterns. Now it's time to study any key in any position.

Please replace the paragraph at page 19, lines 9-13 with the following paragraph.

For viola, a grand C major scale chart with open strings C, G, D, and A baseboard (Figure 5A) in seven positions is served as its master key just as G major does in violin. The grand C major scale for viola also starts with red template mMIL as its 1st position finger pattern. The rainbow color sequence follow[s]ed is the same as that in violin finger patterns.

Please replace the paragraph at page 20, lines 1-5 with the following paragraph.

*Enharmonic Keys:

F# major (6 sharps) = Gb major (6 flats)

C# major (7 sharps) = Db major (5 flats)

B major (5 sharps) = Cb major (7 flats)

Please replace the paragraph at page 20, lines 13-18 with the following paragraph.

*Enharmonic Keys:

D# minor (6 sharps) = Eb minor (6 flats)

A# minor (7 sharps) = Bb minor (5 flats)

G# minor (5 sharps) = Ab minor (7 flats)

Similarly derived from Table 5, Table 7 also shows finger pattern codons of twelve major keys for all positions in viola [(Table 7)].

Please replace the paragraph at page 21, lines 6-9 with the following paragraph.

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Cello is an octave lower than viola and with extended positions (Fig. 5A). Bass is not only tuned at perfect fourth apart but also has half and first positions. These are all different from violin but the basic principles of the present invention still apply.

Please replace the paragraph at page 26, lines 6-13 with the following paragraph.

8) The suggestions for learning the present method are based on studying the seven finger pattern templates selectively (Fig[ure]s. 2A to 2H). Learn first the positions of G major red template, D major green template, and C major blue template. Then study the orange template for G II and indigo for C II. After completing the third position yellow template for G major and violet for C major, one has become familiar with all the finger patterns and is ready to play any key in any position.

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Marked-Up Version of Amended Abstract

Please replace the abstract with the following amended abstract.

ABSTRACT OF THE DISCLOSURE

A tool for learning positions of notes on a [finger board]fingerboard of a stringed-instrument having a [base board]baseboard and templates [that]for placement over the baseboard so as to focus a student's attention on finger patterns that are necessary to master a stringed instrument. Additional embodiments include color-coded templates and finger pattern codons that correspond to finger patterns used to play notes on various stringed instruments.